

# The ratio of additional learning resource and activity facilities in e-learning of Sebelas Maret University

D. Wahyuningsih

*Universitas Negeri Sebelas Maret, Indonesia*

S. Suyanto & A. Ghufron

*Universitas Negeri Yogyakarta, , Indonesia*

**ABSTRACT.** Sebelas Maret University (UNS) use e-learning either as a supplement or complement the learning. The software used in e-learning UNS is Moodle 3.02+ with address **Error! Hyperlink reference not valid.** The purpose of this research is to determine the ratios of the used additional learning resource facilities to the amenities offered in the e-learning pages UNS and the used additional learning activity facilities to the amenities offered in e-learning pages UNS. The used research method is the documentation method. The document is the e-learning UNS report period of 3 March to 7 November 2016 that is 23021 data. Based on data analysis, it is obtained the facilities that are used in e-learning UNS and the amount of use. These facilities consist of additional learning resources and additional learning activities. The additional learning resources, the used facilities are the form of books, files, pages, and URL. The additional learning activities, the used facilities are the assignment, chat, database, forum, lessons, and quiz. The ratio of additional learning resource facilities that are used to the amenities offered is 57.14% and the ratio of additional learning activity facilities that are used to the amenities offered is 46.67%.

## 1 INTRODUCTION

Successful learning requires good planning, organizing, actuating, and controlling of learning. Planning, organizing, actuating, and controlling are function of management (Terry 2013). Planning, organizing, actuating, and controlling are conducted on the resources of learning. Planning, organizing, actuating, and controlling of the resources of learning are needed to accomplish effective and efficient learning and management of the so-called learning management.

Learning management that blend between face-to-face learning and e-learning-assisted learning is called a blended learning management. Blended learning provides opportunities for learners to learn independently outside face-to-face meetings with teacher. Thus, blended learning provide access to learning for learners which is far broader than just in-person learning. As well as face-to-face learning, blended learning has a weakness of which the need for preparedness and readiness of educators to prepare learners to access it. Readiness of students for independent study occurred mostly higher education environments.

## 2 LITERATURE REVIEW

Blending between face-to-face learning and online learning will maximize the efforts of educators as a manager in achieving the learning

objectives (Ayala 2009). Blended learning also namely as hybrid learning, flexible learning, or distributed learning (Vignare 2007). The flexibility in time and place of this learning makes this kind of learning gives the student to learn widely (Bath & Bourke 2010, Thorne 2003). Online learning or electronic learning which is popular with short e-learning has several definitions. The definition given by Morrison (2003), Erdem & Kibar (2014), and epignosis LCC (2014) is an e-learning as software therein can be organized learning. Software specifically for the learning called the Learning Management System (LMS). The examples are Claroline Open Source LMS, Edmodo, Manhattan, Atutor, and Moodle.

The function of e-learning in-person learning can be as a supplement, complement, or substitution (Siahaan 2003). E-learning as a supplement means that e-learning is an addition of face-to-face meeting so that no e-learning despite running full in face-to-face learning. E-learning as a complementary means that e-learning is a complement to face-to-face meeting or it can be said that if there is no e-learning, so face-to-face learning is not complete. E-learning as a substitution means that e-learning replacing face-to-face meetings.

Today, many e-learning portal developed by software Learning Management System (LMS) called Moodle (Surjono 2009). One of the common web application for learning is Moodle, open

source platform and free (Parikesit 2014). In Moodle person can contribute to an administrator, teacher, teacher who does not edit, student, and the guest. Administrator can act as teacher, teacher who does not editing, student, or guest. Teacher can play a role as a teacher who does not edit and student, while the teacher who does not edit only can see the results but cannot act as student. In construct a course or a class like in face-to-face meeting, Moodle provides additional learning resources facilities (add resources menu) and additional learning activities facilities (add activities menu). In general, the additional learning resources facilities in Moodle generally are book, file, folder, label, page, and the URL, while the additional learning activities facilities generally are assignment, chat, database, feedback, forum, lessons, quizzes, surveys, and wiki.

### 3 RESEARCH METHODS

The used research method is the documentation method. The document is the report of the e-learning UNS period of 3 March to 7 November 2016 that is 23021 data. The sample of those data is presented in table 1. The purposes of research are to determine the ratio of used additional learning resource facilities to the amenities offered in the e-learning pages UNS and the ratio of used additional learning activity facilities to the amenities the offered in e-learning pages UNS. Page of e-learning UNS is presented in figure 1.

**Table 1. Sample of the e-learning UNS report**

Time	User full name	Affected user	Event context	Component	Event name	Description	Origin	IP address
10/10/16, 13:03	Yudianto Sujana	-	Quiz: Kuis 1	System	Course module updated	The user with id '22983' updated the 'quiz' activity with course module id '13430'.	web	112.21 5.172.5 9
9/10/16, 13:15	Co-ass 6 Lilis Ike Nur C	-	Assignmen t: Tugas RKP	Assignm ent	Grading table viewed	The user with id '275562' viewed the grading table for the assignment with course module id '13417'.	web	114.12 0.235.5 2
8/10/16, 09:31	Salim Widono	-	Forum: FORUM PERKEN ALAN	System	Course module updated	The user with id '136' updated the 'forum' activity with course module id '13416'.	web	103.23. 224.24 6
8/10/16, 09:31	Co-ass 13 SeptiantiH epri Saputri	H071414 5 Untari Dayu Kencono	Course: Praktikum Pengelolaa n Hama Terpadu	System	User graded	The user with id '275566' updated the grade with id '49297' for the user with id '264553' for the grade item with id '788'.	web	36.81.9 3.95



Figure 1. E-learning of Sebelas Maret University

#### 4 FINDINGS

Since 2015, e-learning UNS use Moodle LMS version 3.02+ with seven facilities in additional learning resources and 15 facilities in the additional learning activities. Facilities additional learning resources are presented in Figure 2 and the additional learning activities are presented in Figure 3 below.

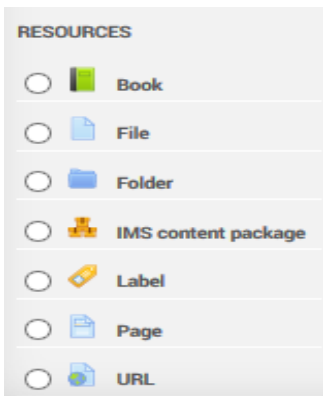


Figure 2. Facilities of **Add Resources** in e-learning UNS site.

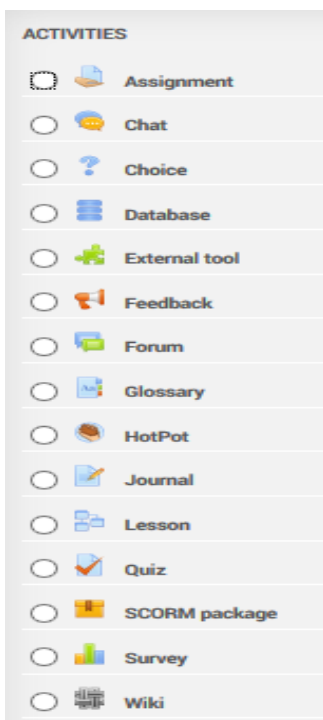


Figure 3. Facilities of **Add Activities** in e-learning UNS site.

Based on the 23021 data in Microsoft Excel table from Moodle report facility, the data are sorted and choose to determine the type of additional facilities of additional learning resources and additional learning activities. The results are presented in Table 2 and Table 3 below. Based on the results obtained Table 2, four facilities used in additional learning resources is books, files, pages, and URL. Based on the results obtained Table 3, facilities used in additional learning activities are assignment, chat, database, forum, lessons, and quiz. Those results are presented graphically in Figure 4 and Figure 5.

Facilities additional learning resources presented in Table 1 are books, file, page, and URL. Books is kind of learning resources that present a full book in file. Books in this facility usually called as electronic book or e-book. File is kind of learning resources like some text, picture, animation, or movie that related to the subject of learning. Page is kind of learning resources that represent some page of website related to the subject of learning. URL is kind of learning resources that represent some page address related to the subject of learning.

Facilities additional learning activities presented in Table 2 are assignment, chat, database, forum, lessons, and quiz. Assignment is a learning activity for student to submit their assignment file according to the problem that teacher has been shared. Chat is a learning activity to communicate personally between teacher and student and between students their self. Database is a learning activity to collect the data in one place. Forum is a learning activity for discussion between teacher and students. Lesson is a learning activity to conduct the lesson. Quiz is a learning activity to conduct the assignment directly.

If both results (Picture 2 and Picture 3) are respectively compared with the amenities offered in e-learning UNS, it is obtained the ratio of used facilities. The ratio of used additional learning resource facilities to the amenities offered is 57.14% and the ratio of used additional activity facilities to the amenities offered is 46.67%. The 57.14% present the used additional learning resources facilities is half of the available additional learning resources facilities in e-learning UNS. The 46.67% present the used additional learning activities facilities is less than half of the available additional learning activities facilities in e-learning UNS.

Table 2. Facilities of used **add resources** in e-learning UNS site.

No	Resource	Amount	%
1	Book	4	7,02
2	file	6	10,53
3	page	6	10,53
4	URL	41	71,93
	Total	57	100

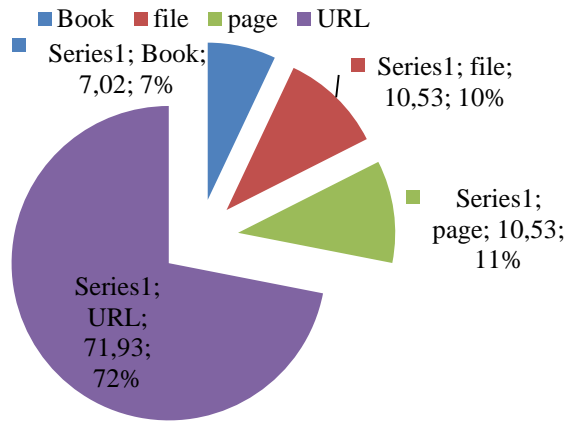


Figure 4. Facilities of used add resources in e-learning UNS site

Table 3. Facilities of used **add activities** in e-learning UNS site.

No	Activity	Amount	%
1	Assignment	5	0,18
2	Chat	50	1,79
3	Database	5	0,18
4	Forum	2636	94,28
5	Lesson	79	2,83
6	Quiz	21	0,75
	total	2796	100

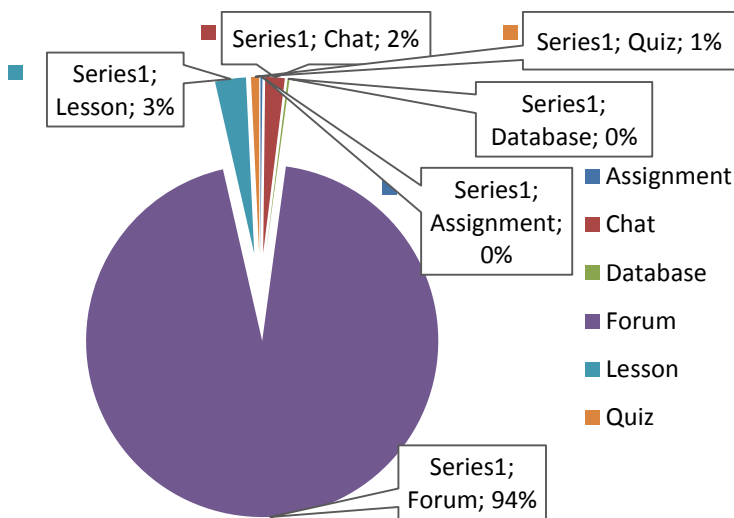


Figure 5. Facilities of used add activities in e-learning UNS site

## 5 CONCLUSION

Based on research, it can be concluded that the ratio of used additional learning resource facilities to the amenities offered in e-learning UNS site is 57.14% and the ratio of used additional learning activity facilities to the amenities offered in e-learning UNS site is 46.67%.

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